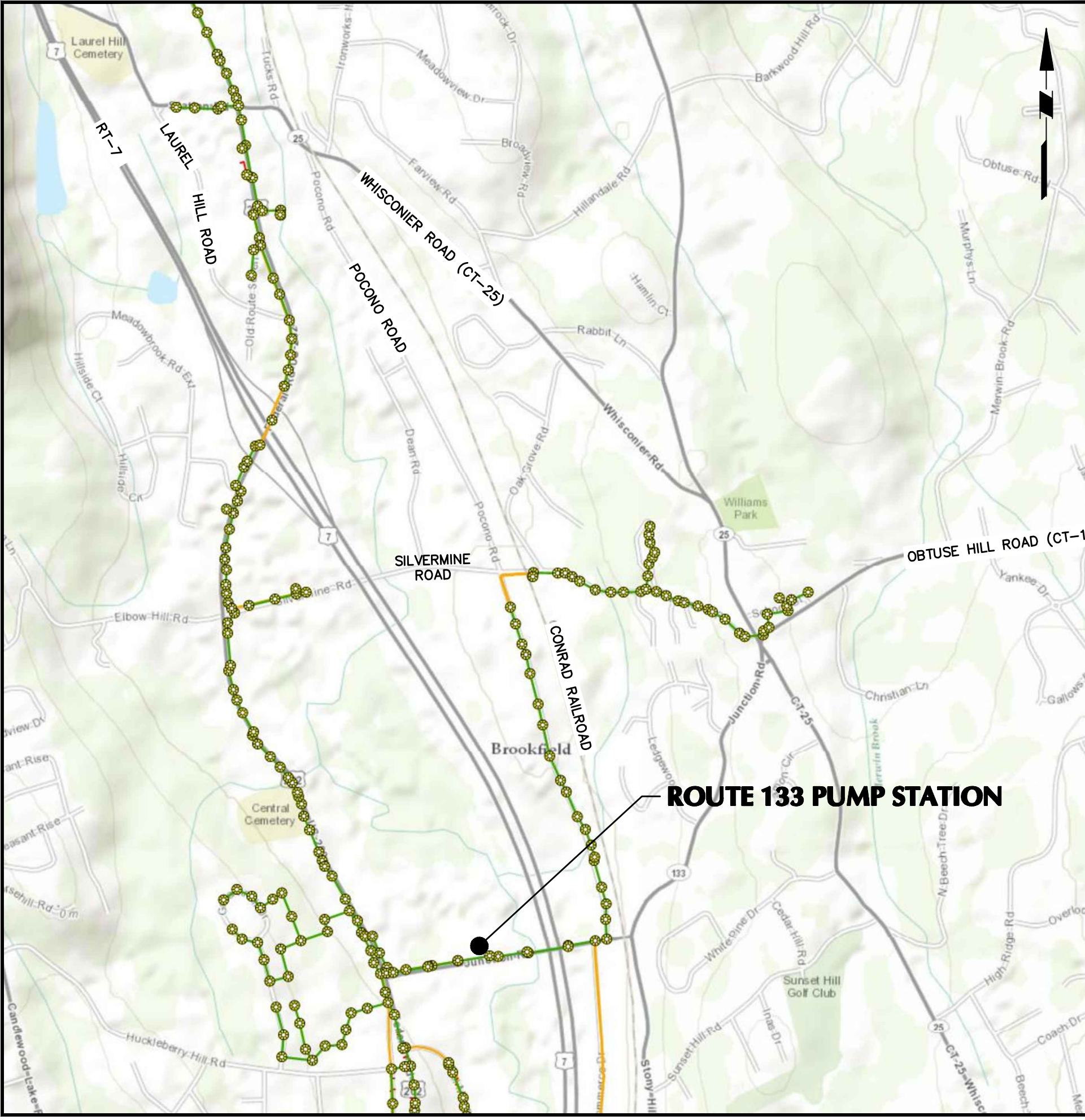


# PUMP STATION IMPROVEMENT DRAWINGS

FOR  
 ROUTE 133 PUMP STATION IMPROVEMENTS  
 IN  
 TOWN OF BROOKFIELD  
 FAIRFIELD COUNTY, CONNECTICUT



**LOCATION MAP**

N.T.S.

DRAWING LIST		
SHEET NO.	PAGE NO.	DRAWING TITLE
CS001	1 OF 5	COVER SHEET
CS101	2 OF 5	PUMP STATION IMPROVEMENTS PLAN
CS501	3 OF 5	SITE DETAILS
E-01	4 OF 5	ELECTRICAL SITE PLAN
E-02	5 OF 5	ELECTRICAL SINGLE LINE, SCHEDULES AND DETAILS

Date	Description	No.
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REVISIONS

SIGNATURE: W. CHARLES UTSCHIG JR.  
 DATE SIGNED: PROFESSIONAL ENGINEER CT Lic. No. 0019262

**LANGAN**

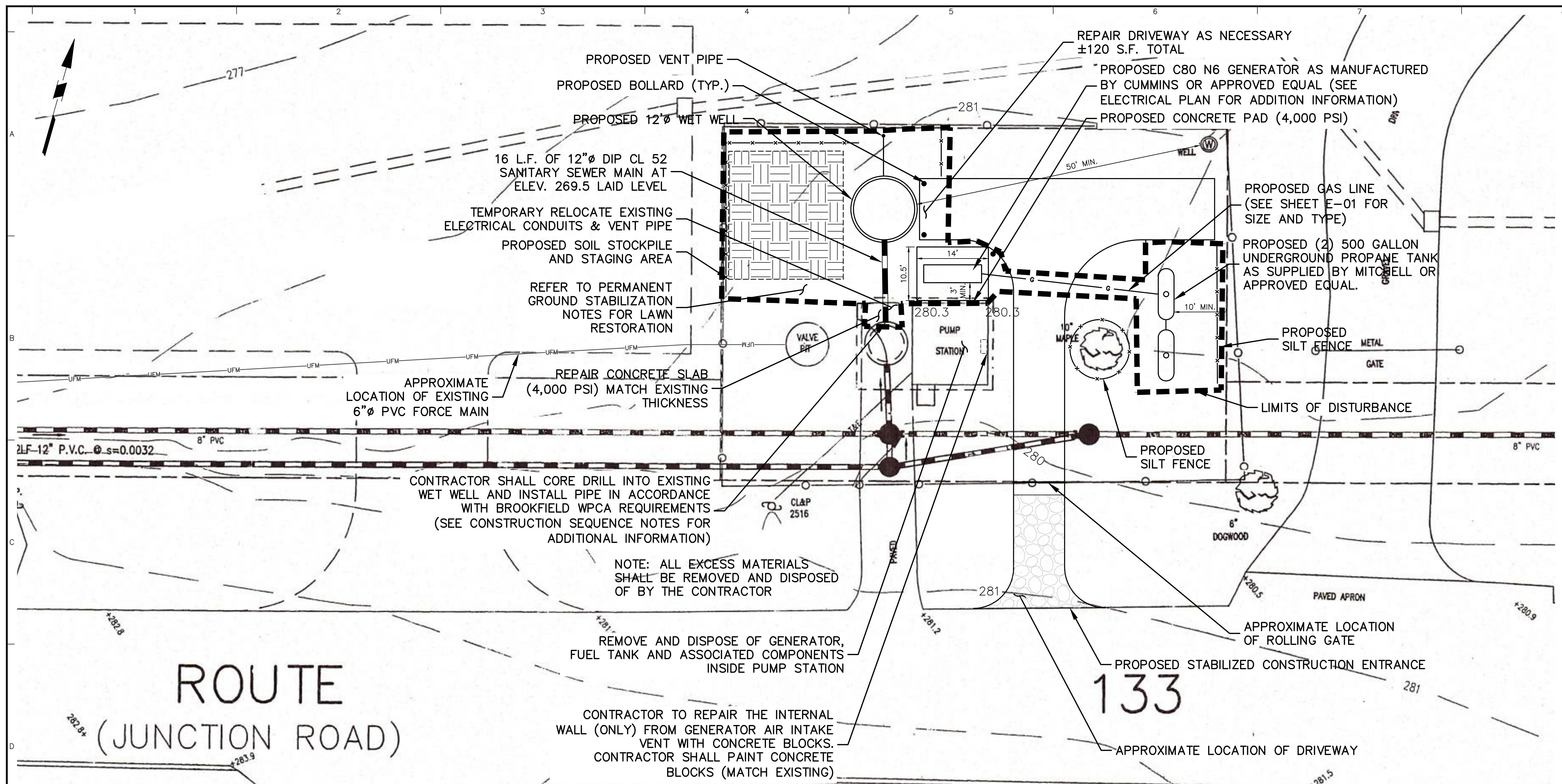
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Project  
**ROUTE 133 PUMP STATION IMPROVEMENTS**  
 BROOKFIELD  
 FAIRFIELD COUNTY CONNECTICUT

Drawing Title  
**COVER SHEET**

Project No. <b>190011048</b>	Drawing No. <b>CS001</b>
Date <b>JUNE 5, 2020</b>	
Drawn By <b>EK</b>	
Checked By <b>CU</b>	



**ROUTE 133**  
(JUNCTION ROAD)

Date	Description	No.
REVISIONS		

SIGNATURE: W. CHARLES UTSCHIG JR.  
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Project: **ROUTE 133 PUMP STATION IMPROVEMENTS**  
FAIRFIELD COUNTY BROOKFIELD CONNECTICUT

Drawing Title: **PUMP STATION IMPROVEMENT PLAN**

Project No. 190011048  
Date: JUNE 5, 2020  
Drawing No. CS101  
Drawn By: EK  
Checked By: CU  
Sheet 2 of 5

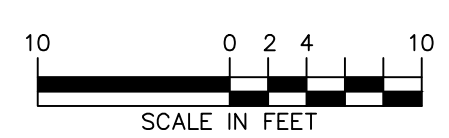
- GENERAL NOTES**
- BASEMAP INFORMATION IS TAKEN FROM A ROUTE 133 PLAN AND PROFILE AS-BUILT, PREPARED BY C.G. ENGINEERS, INC. REVISED DATED OCTOBER 4, 2004.
  - THE CONTRACTOR SHALL HAVE ALL UNDERGROUND UTILITIES LOCATED PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR OR CONSTRUCTION MANAGER SHALL CONTACT THE OWNERS OF ALL UTILITIES AFFECTING THE SITE PRIOR TO THE START OF CONSTRUCTION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ASCERTAIN THE EXACT LOCATION OF UTILITIES FROM THE OWNERS PRIOR TO CONSTRUCTION. UNDERGROUND UTILITIES CALL CENTER OF CONNECTICUT (800)-922-4455.
  - THE CONTRACTOR IS TO STRICTLY ADHERE TO ALL OF THE RULES AND REGULATIONS OF THE BROOKFIELD WPCA IF THERE IS A CONFLICT BETWEEN SAID RULES AND REGULATIONS AND THE CONTRACT DOCUMENTS. THE RULES AND REGULATIONS SHALL GOVERN.
  - ALL ELECTRICAL WORK SHALL BE PERFORMED AS REQUIRED BY APPLICABLE SECTIONS OF THE NATIONAL ELECTRICAL CODE, LATEST EDITION, GOVERNING LOCAL CODES, LAWS AND REGULATIONS.
  - THE CONTRACTOR SHALL EXERCISE CARE DURING CONSTRUCTION TO PREVENT DAMAGE TO ANY EXISTING PIPES. DAMAGES TO ANY EXISTING UTILITIES SHALL BE IMMEDIATELY REPAIRED BY THE CONTRACTOR AT NO COST TO THE OWNER.
  - CONTRACTOR SHALL FIELD MEASURE AND VERIFY ALL EXISTING CONDITIONS, DIMENSIONS, ELEVATIONS AND ANGLES IN THE FIELD. ANY UNUSUAL CONDITIONS OR DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR RESOLUTION, PRIOR TO THE PURCHASE, FABRICATION OR ERECTION OF ANY MATERIALS.
  - UPON COMPLETION OF CONSTRUCTION, CONTRACTOR SHALL LEAVE SITE IN A NEAT AND CLEAN MANNER.
  - CONTRACTOR SHALL PROCURE ALL REQUIRED PERMITS, LICENSES AND INSPECTIONS, PAY ALL CHARGES AND FEES AND GIVE NOTICES NECESSARY FOR AND INCIDENTAL TO THE DUE AND LAWFUL PROSECUTION OF THE WORK.
  - THE CONTRACTOR WILL HAVE ACCESS TO WATER ONSITE FROM THE EXISTING WELL.
  - THE CONTRACTOR WILL HAVE ACCESS TO (1) 20-AMP CIRCUIT. ANYTHING IN EXCESS OF THAT, THE CONTRACTOR WILL PROVIDE IN ACCORDANCE WITH ARTICLE 55 IN THE GENERAL CONDITIONS IN THE CONTRACT DOCUMENTS.
  - THE CONTRACTOR MUST COORDINATE WITH THE OWNER ON THEIR PROCEDURES TO ENSURE THERE IS LIMITED DOWN TIME FOR THE PUMP STATION. THE DOWN TIME SHALL NOT EXCEED 4 HOURS.

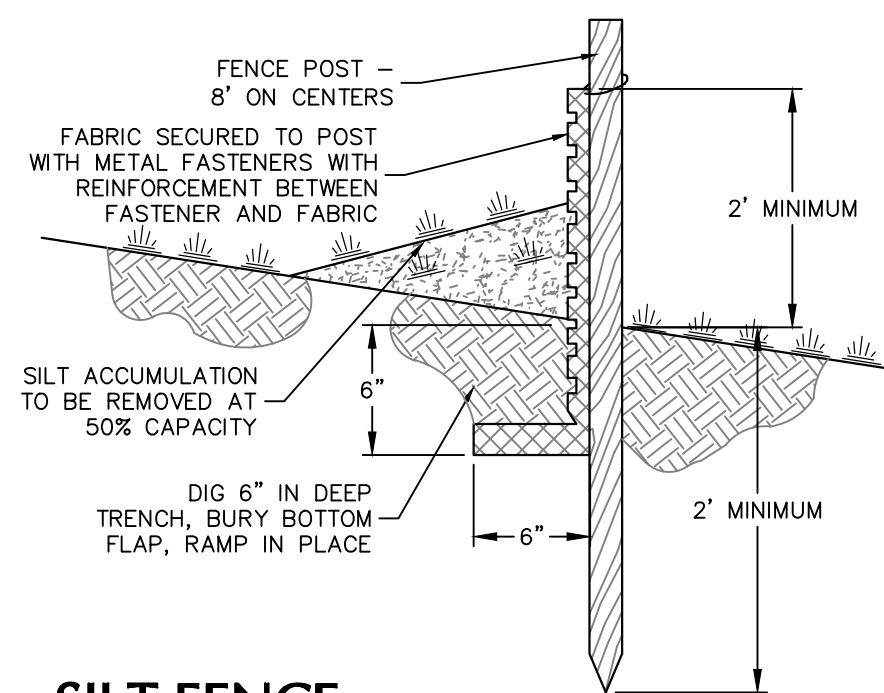
- CONSTRUCTION SEQUENCE**
- THE WORK AS PROPOSED SHALL BE UNDERTAKEN AND COMPLETED DURING PERIODS OF DRY WEATHER. THE CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER, AND THE BROOKFIELD WATER POLLUTION CONTROL AUTHORITY (BWPCA) 48-HOURS PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITY.
  - INSTALL SILT FENCE AS INDICATED ON THE PLAN.
  - CONTRACTOR SHALL INSTALL WET WELL, INCLUDING SHEETING AND SHORING AND ASSOCIATED COMPONENTS, WITHOUT INTERRUPTING THE EXISTING SERVICE. AFTER WET WELL IS INSTALLED, CONTRACTOR SHALL PROVIDE AN EXPLORATION TEST ON THE WET WELL IN ACCORDANCE WITH BWPCA RULES AND REGULATIONS.
  - CONTRACTOR SAW CUT EXISTING WET WELL CONCRETE PAD AND TEMPORARILY RELOCATE ELECTRICAL CONDUITS.
  - CONTRACTOR SHALL CONNECT THE PROPOSED SEWER PIPE TO THE EXISTING WET WELL. THIS WILL BE CONDUCTED DURING LOW FLOW AND DURING PERIODS OF DRY WEATHER. THE CONTRACTOR MUST MAKE THE CONNECTION TO THE EXISTING WET WELL BETWEEN 11PM TO 5AM. THE CONTRACTOR IS TO FOLLOW ALL TOWN OF BROOKFIELD, CT NOISE ORDINANCE REQUIREMENTS DURING NIGHTTIME HOUR OF OPERATIONS. THE BWPCA WILL PUMP THE WET WELL DRY FOR THE CONNECTION AND STOP FLOW UP TO A PERIOD OF 4 HOURS. THE CONTRACTOR SHALL HAVE A LICENSE WASTEWATER HAULER ON-SITE AT THE TIME OF THE CONNECTION. IN THE EVENT THE WASTEWATER HAULER CONTAINER IS FULL PRIOR TO THE CONNECTION COMPLETED, THE WASTEWATER HAULER SHALL EMPTY THE VEHICLE AT A PUMP STATION LOCATION SPECIFIED BY BROOKFIELD WATER POLLUTION CONTROL AUTHORITY AND RETURN ON-SITE.
  - CONTRACTOR SHALL INSTALL CONCRETE PADS, BOLLARDS, GENERATOR, PROPANE TANK, AND ASSOCIATED COMPONENTS, WITHOUT INTERRUPTING THE EXISTING SERVICE.
  - REFER TO THE ELECTRICAL DRAWINGS FOR THE CONSTRUCTION SEQUENCE TO CONNECT THE PROPOSED GENERATOR INTO SERVICE.
  - CONTRACTOR SHALL REMOVE EXISTING GENERATOR, FUEL TANK AND ASSOCIATED COMPONENTS.
  - CONTRACTOR SHALL REPAIR PUMP STATION BUILDING WALL WITH CONCRETE BLOCKS.
  - CONTRACTOR SHALL REPAIR DRIVEWAY. NOTE, THE DRIVEWAY SHALL BE IN THE SAME CONDITION PRIOR TO THE START OF CONSTRUCTION. IF THE CONTRACTOR NEEDS TO REPAIR ADDITIONAL AREAS OF THE DRIVEWAY, THE CONTRACTOR SHALL REPAIR THE AREAS IDENTIFIED BY BWPCA AND BE AT NO ADDITIONAL COST TO THE OWNER.
  - CONTRACTOR SHALL REMOVE EXCESS EXCAVATED MATERIAL, GENERATOR, FUEL TANK, CONSTRUCTION DEBRIS, ETC. FROM THE SITE.
  - TOPSOIL, SEED, AND MULCH ALL DISTURBED AREAS AS SOON AS PRACTICAL IN ACCORDANCE WITH THE PERMANENT GROUND STABILIZATION NOTES.

- EROSION & SEDIMENT CONTROL NOTES**
- ALL SOIL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE INSTALLED IN ACCORDANCE WITH THE CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL, LATEST EDITION.
  - SILT FENCE SHALL BE INSTALLED AS SHOWN ON DRAWING PRIOR TO BEGINNING ANY CLEARING AND GRUBBING.
  - ALL TOPSOIL TO BE STRIPPED FROM THE AREA BEING DEVELOPED SHALL BE STOCKPILED AND IMMEDIATELY SEEDED WITH LOLIUM PERENNE ARISTATUM OR LOLIUM PERENNE MULTIFLORUM FOR TEMPORARY STABILIZATION. LOLIUM PERENNE ARISTATUM SHALL BE USED FOR WINTER SEEDING AND LOLIUM PERENNE MULTIFLORUM SHALL BE USED FOR SPRING AND SUMMER SEEDING.
  - PAVED ROADWAYS SHALL BE KEPT CLEAN AT ALL TIMES.
  - STORMWATER FROM DISTURBED AREAS MUST BE PASSED THROUGH AN EROSION CONTROL DEVICE BEFORE BEING DISCHARGED BEYOND DISTURBED AREAS OR INTO OTHER DRAINAGE SYSTEMS.
  - EROSION CONTROL MEASURES SHALL REMAIN IN PLACE UNTIL ALL DISTURBED AREAS ARE SUITABLY STABILIZED.
  - ALL SITE RESTORATION SHALL BE PERFORMED IN A TIMELY MANNER TO LIMIT THE LENGTH OF TIME ANY AREA IS EXPOSED AND UNSTABLE.

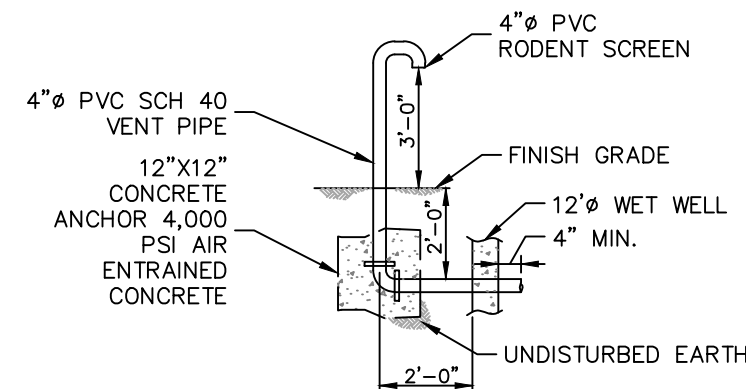
**PERMANENT GROUND STABILIZATION**

SPECIES	LBS. PER ACRE	PER 1000 S.F.
SPREADING FESCUE	15	0.3
CHEWINGS RED FESCUE	15	0.3
KENTUCKY BLUEGRASS	25	0.6
PERENIAL RYEGRASS	10	0.2
<b>SEEDBED PREPARATION</b>		
LIMESTONE (50% Ca + MgO <sup>5</sup> )		
CLAY, CLAY LOAM, HIGH ORGANIC SOIL	8000	180
SANDY LOAM, LOAM, SILT LOAM	6000	135
LOAMY SAND, SAND	4000	90
FERTILIZER (10-20-10 OR EQUIV.)	500	11



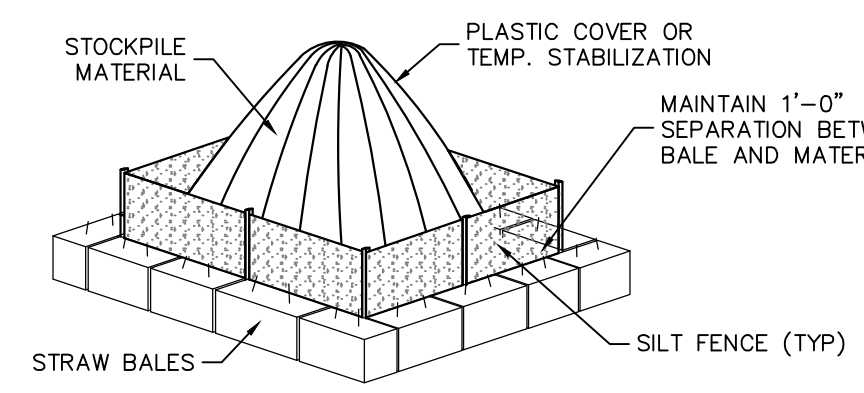


**SILT FENCE**  
SCALE: NTS



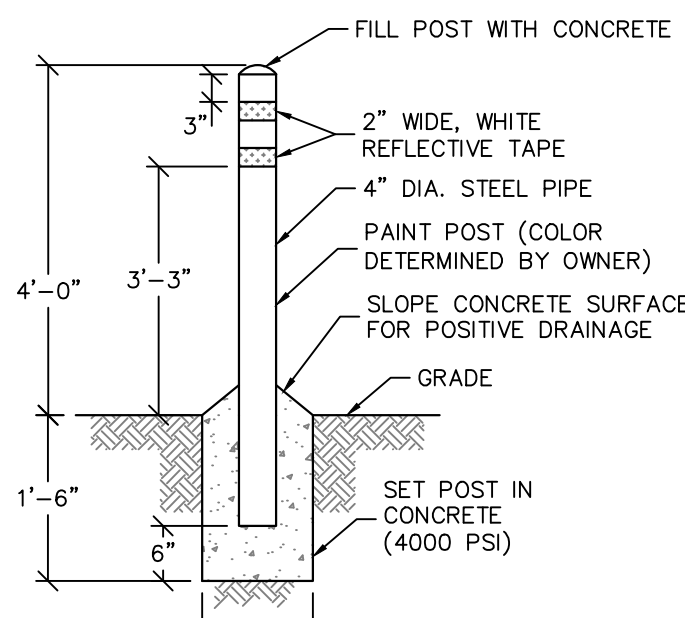
**NOTES:**  
1. VENT PIPE PENETRATION SHALL BE LINK SEAL MODEL #CS-6 OR APPROVED EQUAL.

**VENT DETAIL**  
SCALE: NTS

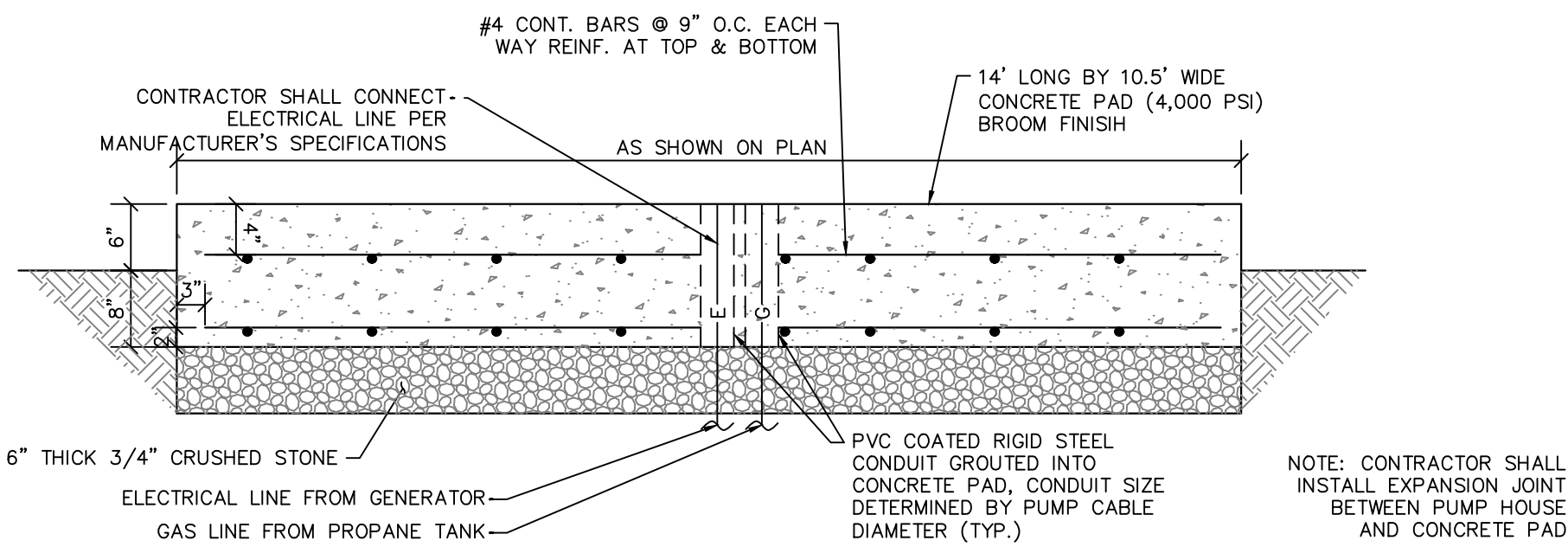


**NOTE:**  
STOCKPILE SHALL BE COVERED ENTIRELY BY AN ANCHORED PLASTIC COVER OR SEEDED IF NOT IN USE AFTER 14 DAYS.

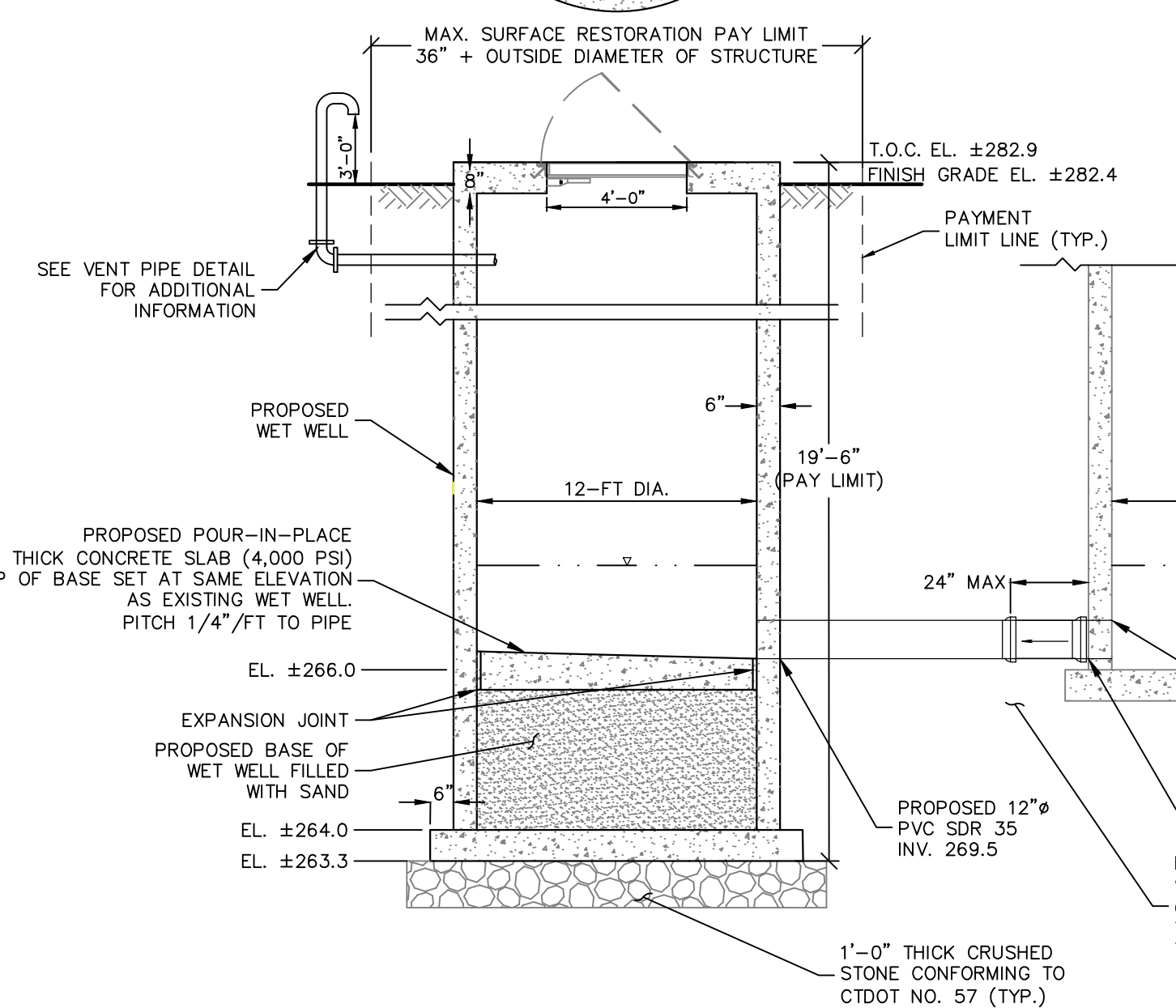
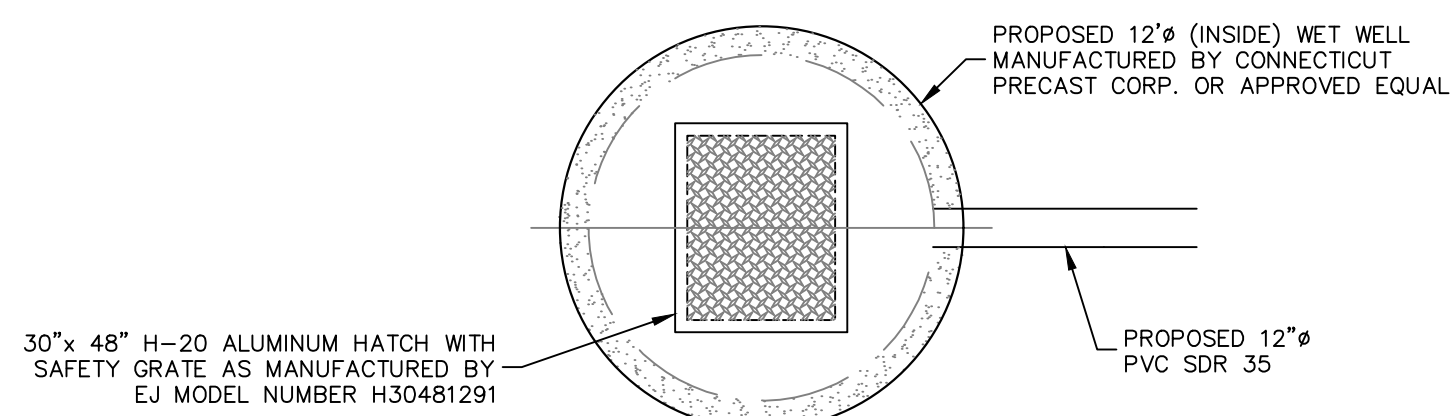
**STOCKPILE CONTROL**  
SCALE: NTS



**TYPICAL BOLLARD DETAIL**  
SCALE: NTS



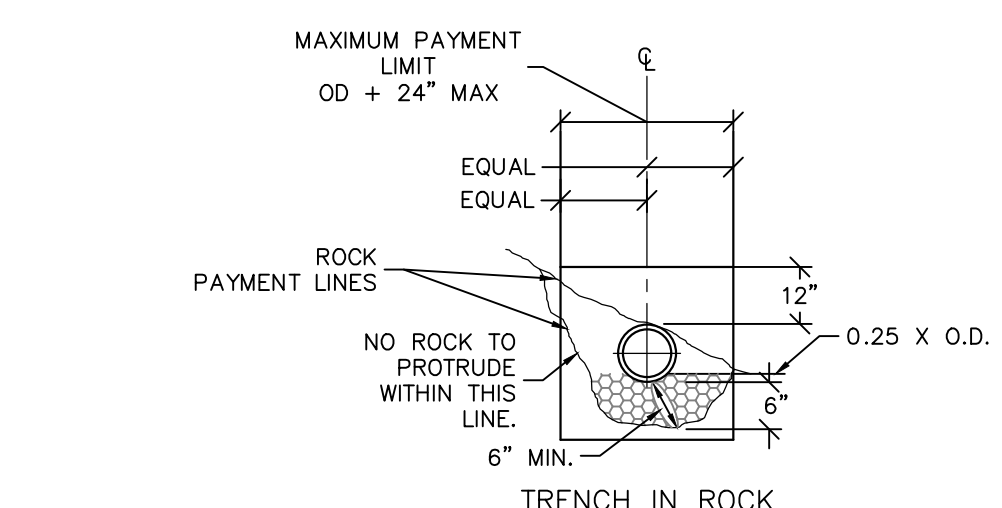
**CONCRETE PAD DETAIL**  
SCALE: NTS



**PUMP STATION NOTES:**  
1. THE CONTRACTOR SHALL PROVIDE STRUCTURAL CALCULATIONS (INCLUDING BUOYANCY CALCULATIONS) FOR THE WET WELL AND VALVE CHAMBER ASSUMING WATER AT GRADE ELEVATION. THE CALCULATIONS SHALL BE SIGNED & SEALED BY A CONNECTICUT PROFESSIONAL ENGINEER AS PART OF THE SHOP DRAWING SUBMITTAL. THE STRUCTURES ARE TO BE DESIGNED FOR A LIVE LOADING OF HS-20 PER AASHTO.  
2. AREAS OF ALUMINUM IN CONTACT WITH CONCRETE SHALL BE PROVIDED WITH A BITUMASTIC COATING. AREAS IN WHICH DISSIMILAR METALS ARE IN CONTACT SHALL BE PROVIDED WITH NON-METALLIC ISOLATORS.

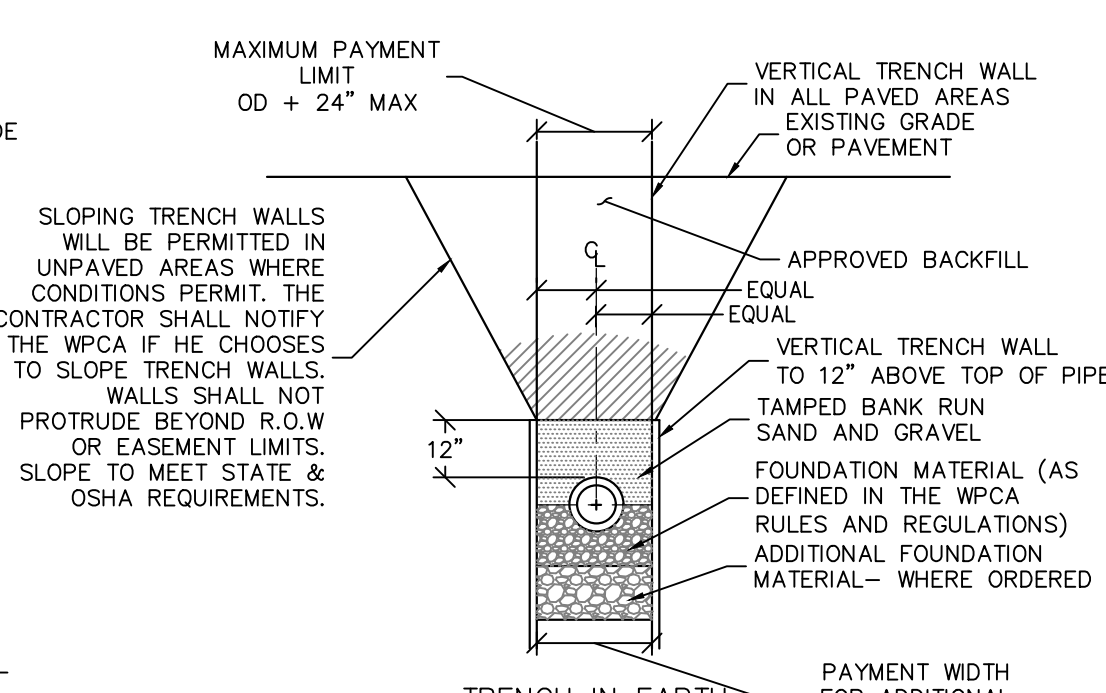
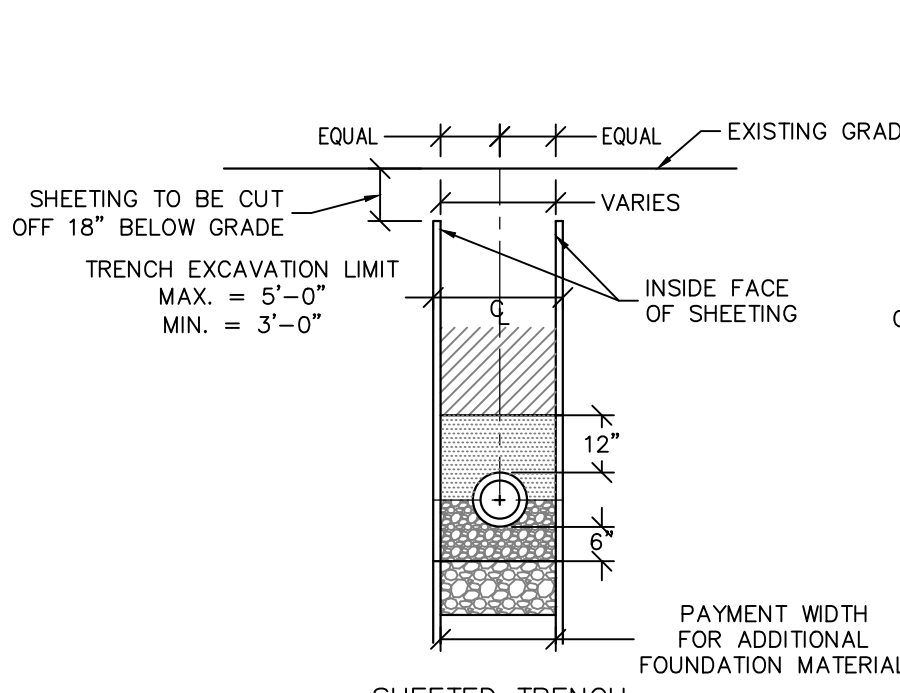
**PRECAST CONCRETE**  
1. ALL PRECAST CONCRETE WORK SHALL BE IN COMPLETE ACCORDANCE WITH THE REQUIREMENTS OF ACI 318, "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE", AND ACI 301, "SPECIFICATIONS FOR CONCRETE BUILDINGS", LATEST EDITIONS, AND IN ACCORDANCE WITH THE GENERAL NOTES ON CONCRETE CONSTRUCTION ON THIS SHEET.  
2. PRECAST CONCRETE SHALL BE MANUFACTURED WITH PROCEDURES AND TESTING REQUIREMENTS IN ACCORDANCE WITH PCI MNL116, "MANUAL FOR QUALITY CONTROL FOR PLANTS AND PRODUCTION OF STRUCTURAL PRECAST CONCRETE PRODUCTS".  
3. ALL PRECAST CONCRETE SHALL BE DESIGNED BY THE MANUFACTURER'S ENGINEER. DESIGN SHALL BE PREPARED BY A PROFESSIONAL ENGINEER, LICENSED IN THE STATE OF CONNECTICUT.  
4. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF THE PRECAST CONCRETE ELEMENTS & BUOYANCY CALCULATIONS FOR REVIEW BY PROJECT ENGINEER. DRAWINGS SHALL BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF CONNECTICUT.

**12' DIA. WET WELL**  
SCALE: NTS

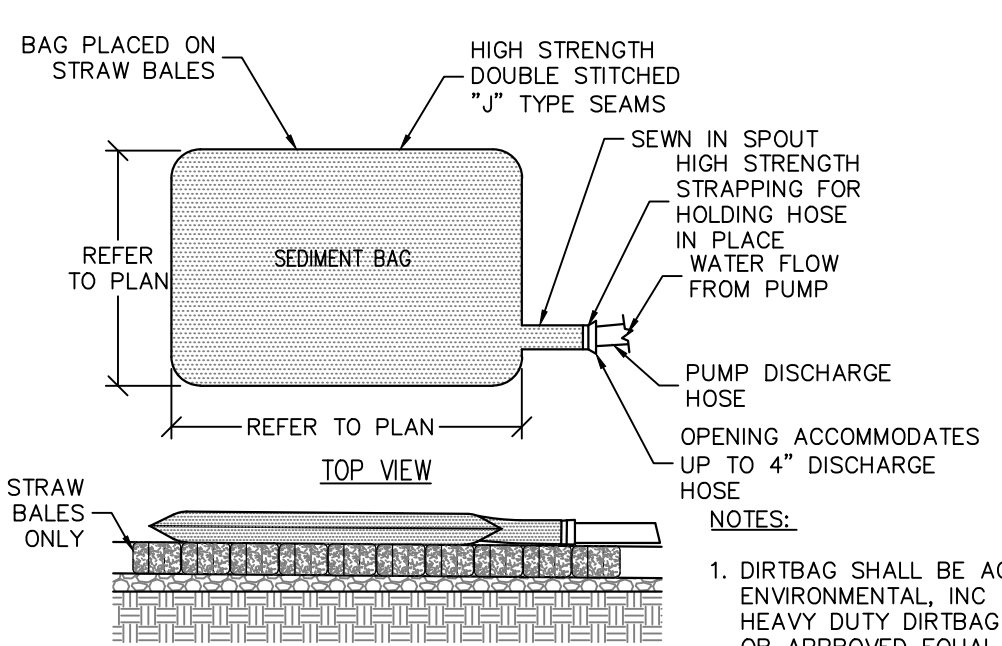


**NOTES:**  
1. NO TRENCH CONTAINING SEWER SHALL BE BACKFILLED UNTIL THE WPCA HAS COMPLETED AN INSPECTION OF AND APPROVED THE WORK.  
2. PROVIDE METALLIC MARKING TAPE 18" BELOW GRADE LABELED "SEWER" OVER THE MAINS, SERVICE LINES & FORCE MAINS.

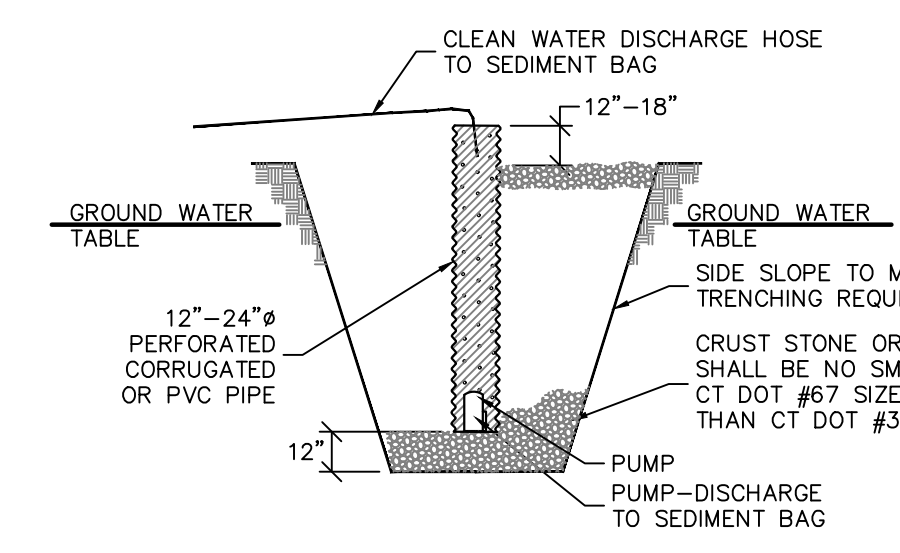
**TRENCH SECTIONS FOR FLEXIBLE PIPE**  
SCALE: NTS



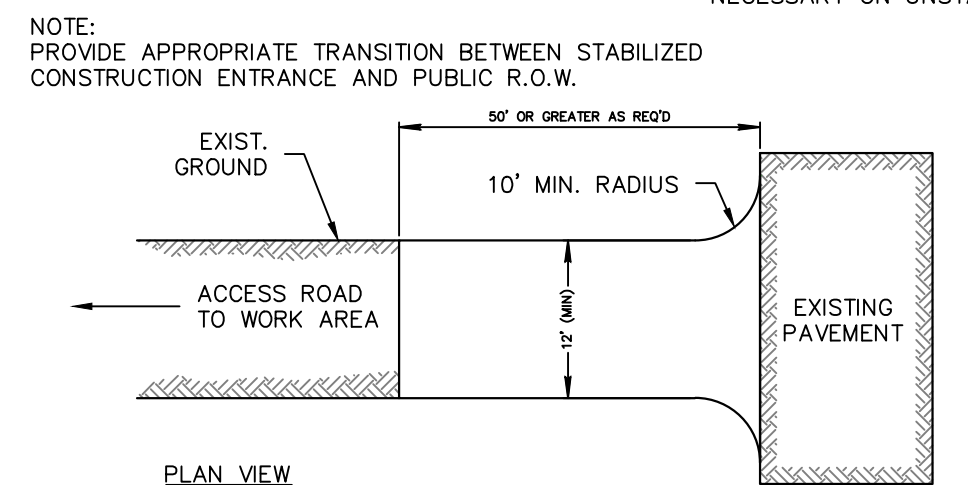
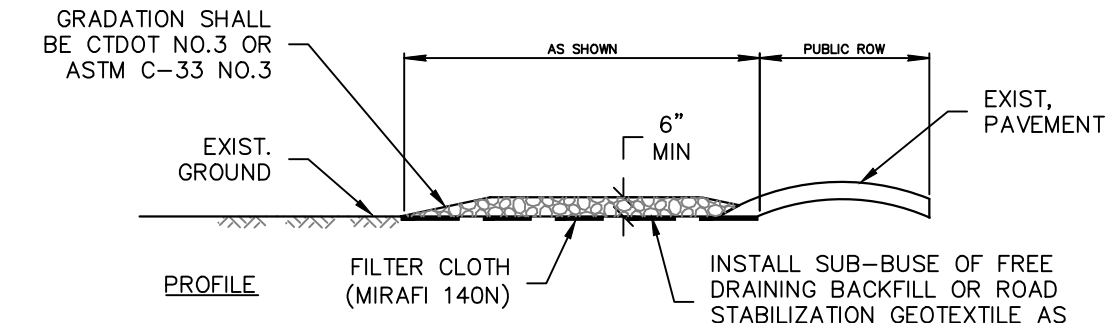
**CONSTRUCTION SPECIFICATIONS:**  
1. PIT DIMENSIONS TO BE PROVIDED BY A LICENSED CT ENGINEER RETAINED BY THE CONTRACTOR. ALL DEWATERING, CALCULATIONS AND PLANS SHALL BE SUBMITTED DURING THE SHOP DRAWING REVIEW PROCESS.  
2. THE STANDPIPE DIAMETER AND NUMBER OF PERFORATIONS SHALL BE COMPATIBLE WITH THE PUMP SIZE BEING USED.  
3. IF EXCESSIVE MOVEMENT OF FINE SOIL PARTICLES FROM THE SURROUNDING EXISTING SOILS IS ANTICIPATED, A PROPERLY DESIGNED GEOTEXTILE SHALL BE PLACED BETWEEN THE EXISTING SOILS AND THE CRUSHED STONE OR GRAVEL BACKFILL.



**SEDIMENT BAG CONTROL SYSTEM**  
SCALE: NTS



**SUMP PIT**  
SCALE: NTS



**STABILIZED CONSTR. ENTRANCE**  
SCALE: NTS

- GENERAL NOTES**
- ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE CONNECTICUT BUILDING CODE, WHICH IS THE ADOPTED BUILDING SUBCODE FOR THE PROJECT SITE.
  - PROVIDE TEMPORARY BRACING AS REQUIRED TO SUPPORT LOADS TO WHICH PROPOSED STRUCTURES MAY BE SUBJECT DURING CONSTRUCTION.
  - CONTRACTOR SHALL FIELD MEASURE AND VERIFY ALL EXISTING CONDITIONS, DIMENSIONS, ELEVATIONS AND ANGLES IN THE FIELD. ANY UNUSUAL CONDITIONS OR DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR RESOLUTION, PRIOR TO THE PURCHASE, FABRICATION, OR ERECTION OF ANY MATERIALS.
  - THE CONTRACTOR SHALL EXERCISE CARE DURING CONSTRUCTION TO PREVENT DAMAGE TO ANY EXISTING PIPES. DAMAGE TO ANY EXISTING UTILITIES SHALL BE IMMEDIATELY REPAIRED BY THE CONTRACTOR AT NO COST TO THE OWNER.
  - AVAILABLE INFORMATION AS TO THE LOCATION OF EXISTING SUBSTRUCTURES AND UTILITIES HAS BEEN COLLECTED FROM THE FILES & VARIOUS SOURCES. THE RESULTS OF SUCH INVESTIGATIONS, SHOWN ON THE CONTRACT DRAWINGS, ARE NOT GUARANTEED AS TO ACCURACY.
  - ALL WORK TO BE CONSTRUCTED IN COMPLIANCE WITH THE "STANDARD DETAILS" AND "SEWER USE REGULATIONS" OF THE BROOKFIELD WATER POLLUTION CONTROL AUTHORITY.
  - ALL EXISTING ELEVATIONS, LOCATION AND DIMENSIONS OF ALL EXISTING UTILITIES, STRUCTURES AND APPURTENANCES WERE GATHERED FROM BEST AVAILABLE SOURCES AND IS NOT GUARANTEED AS TO EXACTNESS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY ALL LOCATIONS, ELEVATIONS AND DIMENSIONS PRIOR TO ORDERING ANY MATERIALS. ALL SHOP DRAWINGS SHALL CONTAIN THE FIELD VERIFIED LOCATIONS, ELEVATIONS, AND DIMENSIONS.
  - UPON COMPLETION OF CONSTRUCTION, CONTRACTOR SHALL LEAVE SITE IN A NEAT AND CLEAN MANNER.
  - THE CONTRACTOR SHALL PROCURE ALL REQUIRED PERMITS, LICENSES, AND INSPECTIONS, PAY ALL CHARGES AND FEES AND GIVE NOTICES NECESSARY FOR AND INCIDENTAL TO THE DUE AND LAWFUL PROSECUTION OF THE WORK.
  - ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IN ACCORDANCE WITH THE CONTRACT DOCUMENTS HEREIN AND THE CONNECTICUT SOIL EROSION AND SEDIMENT CONTROL RULES AND REGULATIONS.
  - NO MATERIAL SHALL BE PLACED OR ANY DISTURBANCE PERMITTED BEYOND THE PROJECT PROPERTY LINE OR RIGHT-OF-WAY WITHOUT THE WRITTEN PERMISSION OF THE PROPERTY OWNER DIRECTLY INVOLVED.
  - CONTRACTOR SHALL BE RESPONSIBLE TO PROTECT AND SUPPORT, IF NECESSARY, ALL EXISTING UTILITIES WHICH MUST BE CROSSED. DAMAGE TO EXISTING UTILITIES SHALL BE REPAIRED IMMEDIATELY TO THE SATISFACTION OF THE UTILITY OWNER.
  - ALL EXCAVATED MATERIAL SHALL BE REMOVED FROM THE SITE TO AN APPROVED LOCATION BY OWNER.

- EXCAVATION, FOUNDATION AND BACKFILLING**
- ALL FOUNDATIONS SHALL BE FOUNDED ON FIRM, UNDISTURBED SOIL. ALL SOFT SPOTS OR OVER-EXCAVATION OF FOOTINGS SHALL BE FILLED WITH ACCEPTABLE FILL MATERIAL AND COMPACTED TO 95% MODIFIED PROCTOR DENSITY. ALL FOOTING EXCAVATIONS SHALL BE FINISHED BY HAND.
  - THE SUBGRADE FOR SLAB SHALL BE PROOF ROLLED, ANY SOFT SPOTS REMOVED AND FILLED WITH SATISFACTORY MATERIAL AND RECOMPACTED.
  - BACKFILL SHALL BE PLACED IN 8-INCH MAXIMUM LIFTS AND COMPACTED TO A MINIMUM DENSITY OF 95% (UNDER SLABS-ON-GRADE AND FOOTINGS) AND 90% ELSEWHERE OF MAXIMUM DENSITY AT OPTIMUM MOISTURE CONTENT AS DETERMINED BY ASTM D1557 MODIFIED PROCTOR.
  - BACKFILL SHALL CONSIST OF NON-EXPANSIVE, FREE-DRAINING, WELL GRADED SAND AND GRAVEL, FREE OF DEBRIS AND ORGANIC MATERIAL. FILL UNDER SLAB-ON-GRADE SHALL BE IN CONFORMANCE WITH ASTM D448, SIZE 10.
  - CONTRACTOR WILL BE RESPONSIBLE FOR, AND SHALL SAFEGUARD AND PROTECT, ALL EXCAVATIONS AND EXISTING STRUCTURES DURING CONSTRUCTION OF FOUNDATIONS BY PROPER SAFEGUARDS WHICH MAY INCLUDE BRACING. IF ANY DAMAGE TO EXISTING STRUCTURES RESULTS DURING CONSTRUCTION, REPAIR/REPLACEMENT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR. ALL REPAIRS/REPLACEMENT MUST BE DONE TO THE SATISFACTION OF THE ENGINEER.
  - ALL EXCAVATIONS AND BACKFILL OPERATIONS SHALL CONFORM WITH CURRENT OSHA REQUIREMENTS AND STANDARDS.
  - THE DESIGN AND OPERATION OF THE GROUNDWATER CONTROLS DURING CONSTRUCTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. A PLAN FOR DEWATERING SHALL BE SUBMITTED TO THE ENGINEER DURING SHOP DRAWING SUBMITTAL PHASE DETAILING THE CONTRACTORS PLAN FOR DEWATERING.

Date	Description	No.
REVISIONS		

SIGNATURE: W. CHARLES UTSCHIG JR.  
DATE SIGNED: 0019262  
PROFESSIONAL ENGINEER CT Lic. No. 0019262

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Project: **ROUTE 133 PUMP STATION IMPROVEMENTS**  
BROOKFIELD CONNECTICUT  
FAIRFIELD COUNTY  
Drawing Title: **SITE DETAILS**

Project No.	Drawing No.
190011048	CS501
Date	JUNE 5, 2020
Drawn By	EK
Checked By	CU
Sheet 3 of 5	

**GENERAL ELECTRICAL NOTES:**

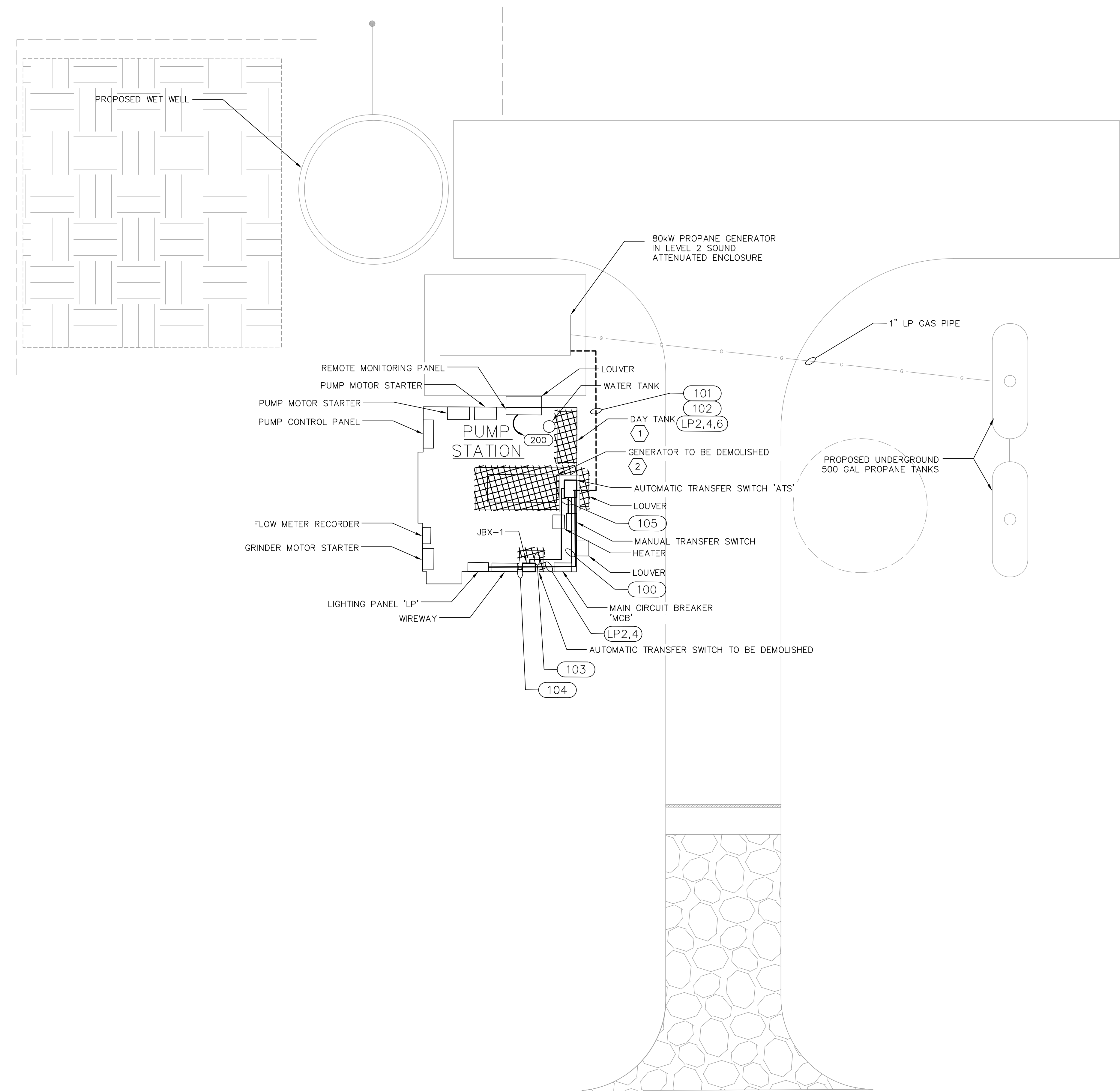
1. WORK SHALL BE PERFORMED AS REQUIRED BY APPLICABLE SECTIONS OF THE NATIONAL ELECTRICAL CODE, LATEST EDITION, GOVERNING LOCAL CODES, LAWS AND/OR REGULATIONS.
2. CONTRACTOR SHALL PROVIDE A COMPLETE OPERABLE SYSTEM IN A WORKMAN LIKE MANNER. OUTLINE DESCRIPTION AND DIAGRAMMATIC REPRESENTATION OF SYSTEM OPERATION AND EQUIPMENT DOES NOT LIMIT CONTRACTOR LIABILITY FOR THE INSTALLATION OF A COMPLETE AND OPERABLE SYSTEM.

**ELECTRICAL KEYNOTES:**

1. CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF THE EXISTING INDOOR DIESEL FUEL TANK AND REQUIRED DISPOSAL OF ALL FUEL TANK CONTENTS.
2. CONTRACTOR SHALL REMOVE THE EXISTING GENERATOR AND PATCH AND RE-FINISH WALL IN PLACE OF EXISTING GENERATOR LOUVER. CONTRACTOR SHALL MOUNT NEW 'ATS' ON RE-FINISHED WALL.

**PROPOSED SEQUENCE OF CONSTRUCTION:**

1. INSTALL NEW OUTDOOR PROPANE GENERATOR AND HAVE NEW ATS ON SITE READY FOR INSTALLATION.
2. SWITCH MTS INTO PORTABLE GENERATOR SUPPLY AND DISCONNECT EXISTING INDOOR GENERATOR FROM MTS. LOAD SIDE OF MTS SUPPLIES EMERGENCY SIDE OF ATS. BROOKFIELD WILL INSTALL THEIR PORTABLE GENERATOR AT THIS STATION TO ALLOW FOR THE REMOVAL OF THE EXISTING INDOOR GENERATOR. BROOKFIELD TO SUPPLY FUEL FOR PORTABLE GENERATOR.
3. DEMOLISH EXISTING INDOOR GENERATOR AND FUEL TANK. BLOCK UP EXISTING GENERATOR EXHAUST WALL OPENING.
4. INSTALL NEW ATS AND THE FOLLOWING RACEWAYS:
  - a. 2" C. FROM ATS TO EXISTING MAIN BREAKER
  - b. 2" C. FROM ATS LOAD SIDE TO NEAR LOCATION OF NEW JBX-1 WITH MECHANICAL TAP CONNECTORS INSIDE.
  - c. 2" C. FROM ATS TO LOAD SIDE OF MTS
  - d. 2" C. FROM OUTDOOR GENERATOR TO GENERATOR SIDE OF MTS.
5. SCHEDULE SHUTDOWN WITH BROOKFIELD AND CONFIRM NO INCLEMENT WEATHER IS ANTICIPATED FOR THE PROPOSED SHUTDOWN DAY. THE PUMP STATION CAN ONLY BE OFFLINE FOR A MAXIMUM OF 1.5 HOURS.
6. PRIOR TO THE SCHEDULED SHUTDOWN, CONTRACTOR SHALL HAVE ALL CABLES PULLED AND READY FOR TERMINATION.
7. PRIMARY CRITICAL PATH ITEM WILL BE MOVING THE LUG DISTRIBUTION CONNECTORS LOCATED IN THE EXISTING ATS DURING THE FIRST OUTAGE. THE MECHANICAL TAP CONNECTORS WILL NEED TO BE PULLED OUT OF THE EXISTING ATS, AND TEMPORARILY WIRED TO THE LOAD SIDE OF THE MTS TO RUN THE STATION ON PORTABLE GENERATOR. PORTABLE GENERATOR TO SUPPLY TEMPORARY POWER TO THE STATION FOR NO MORE THAN 8 HOURS.
8. DEMOLISH EXISTING ATS WHILE ON PORTABLE GENERATOR SUPPLY. INSTALL NEW JBX-1 WITH MECHANICAL TAP CONNECTORS INSIDE. TERMINATE WIRING IN AFOREMENTIONED ITEM 4. A, B, AND D.
9. SECONDARY CRITICAL PATH ITEM WILL BE MOVING THE MECHANICAL TAP CONNECTORS TO JBX-1 DURING THE SECOND OUTAGE. THE CONNECTORS WILL NEED TO BE DISCONNECTED FROM THE LOAD SIDE OF THE MTS, TRIMMED, AND TERMINATED IN JBX-1. AFOREMENTIONED ITEM 4. C MUST NOW BE TERMINATED.
10. RETURN STATION TO NORMAL POWER.



**ELECTRICAL SITE PLAN**  
 0 5 10 15  
 SCALE IN FEET

**LEGEND:**

—	EXISTING
—	NEW
- - - - -	UNDERGROUND
XXXXX	DEMOLITION

Date	Description	No.
REVISIONS		
SIGNATURE		DATE SIGNED

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Project  
**ROUTE 133 PUMP STATION IMPROVEMENTS**  
 BROOKFIELD  
 FAIRFIELD COUNTY CONNECTICUT  
 Drawing Title

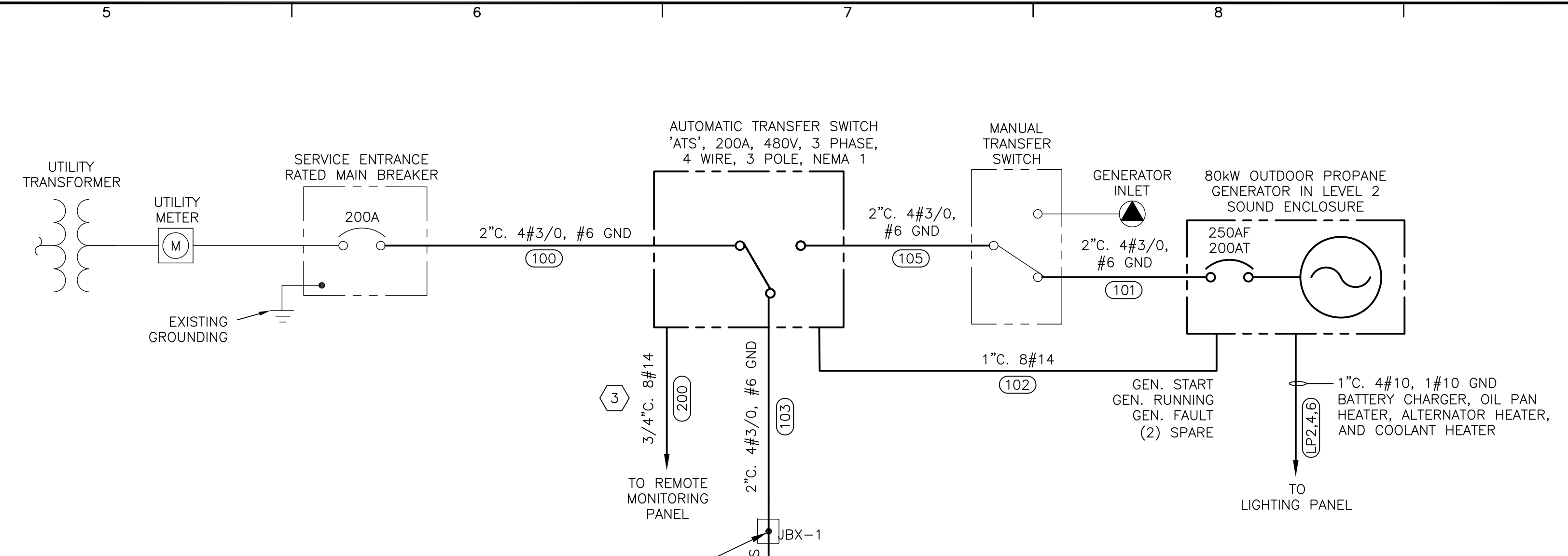
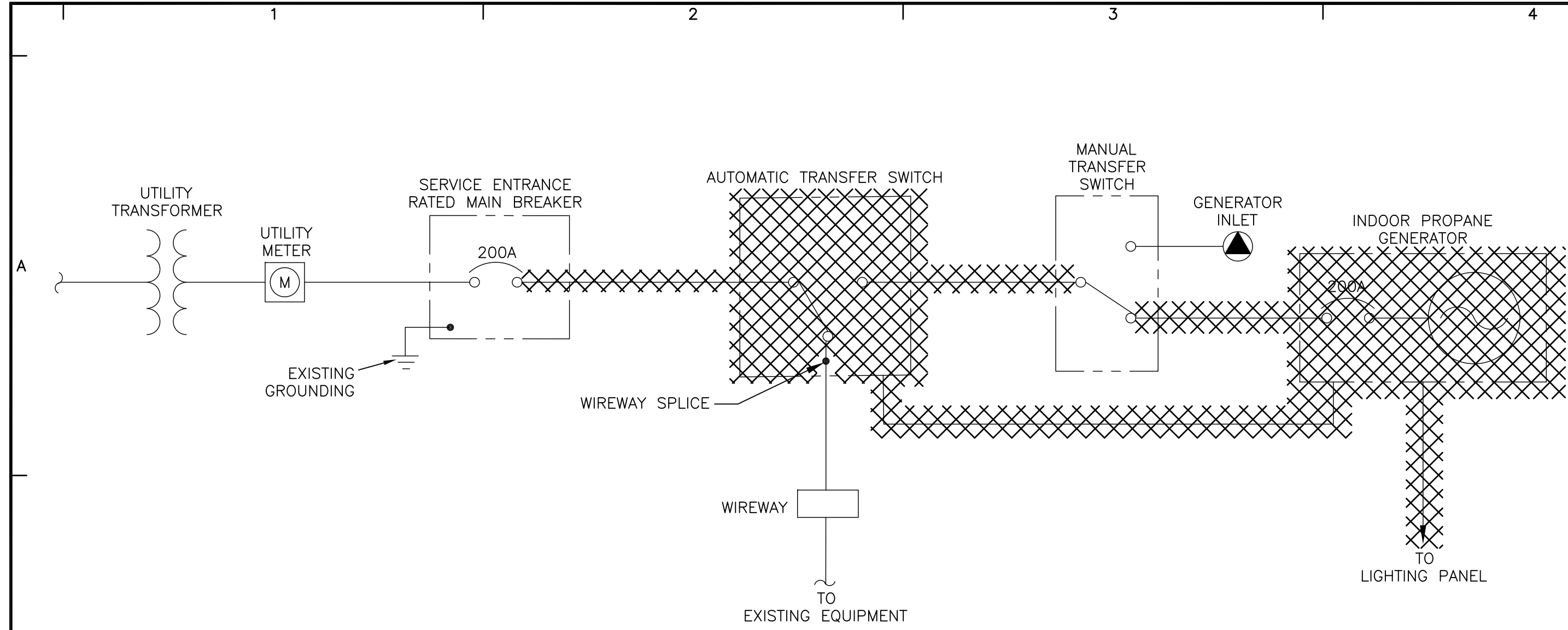
ELECTRICAL SITE PLAN

**Keystone**  
 ENGINEERING GROUP

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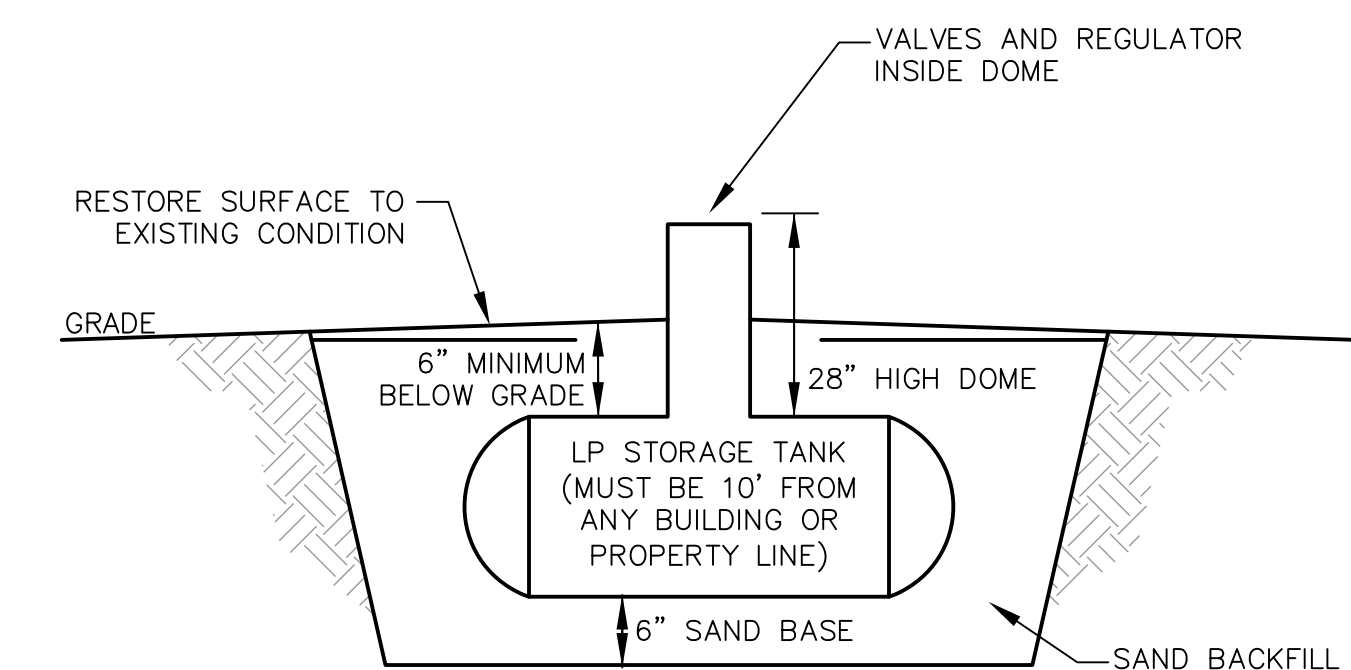
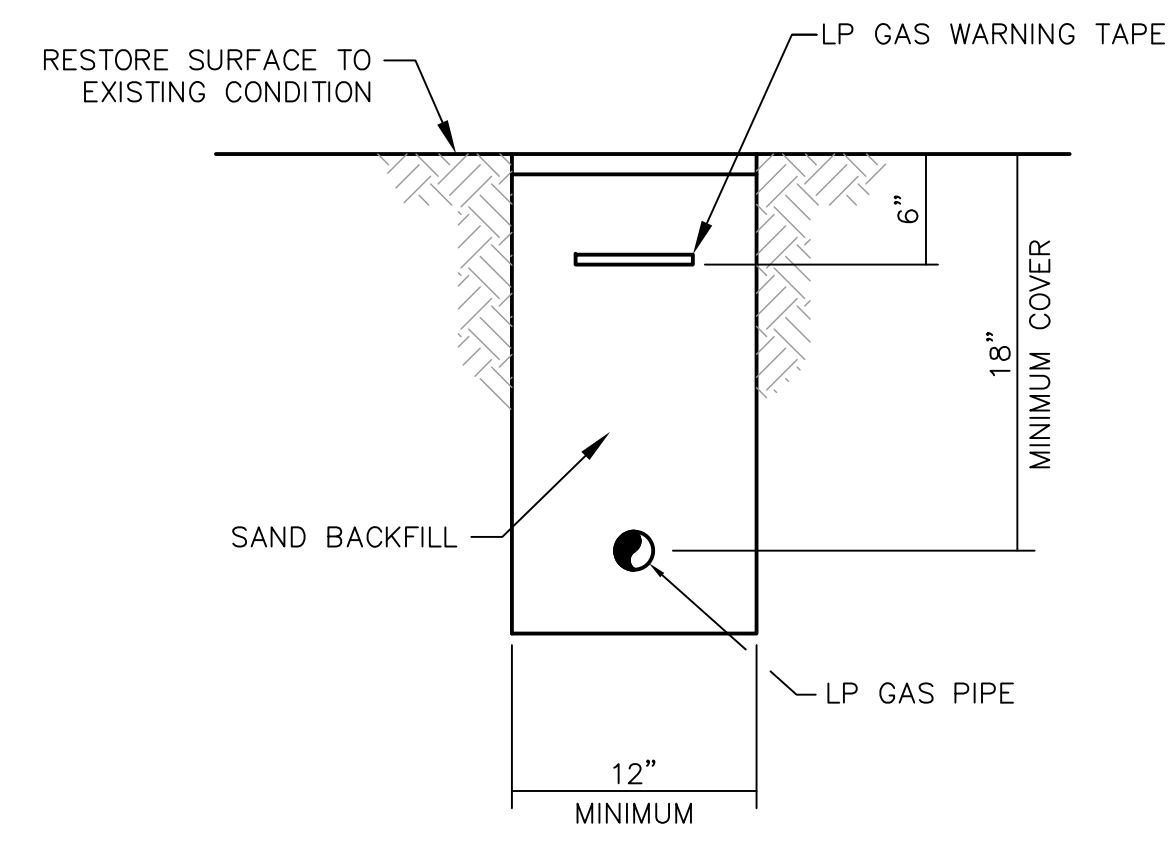
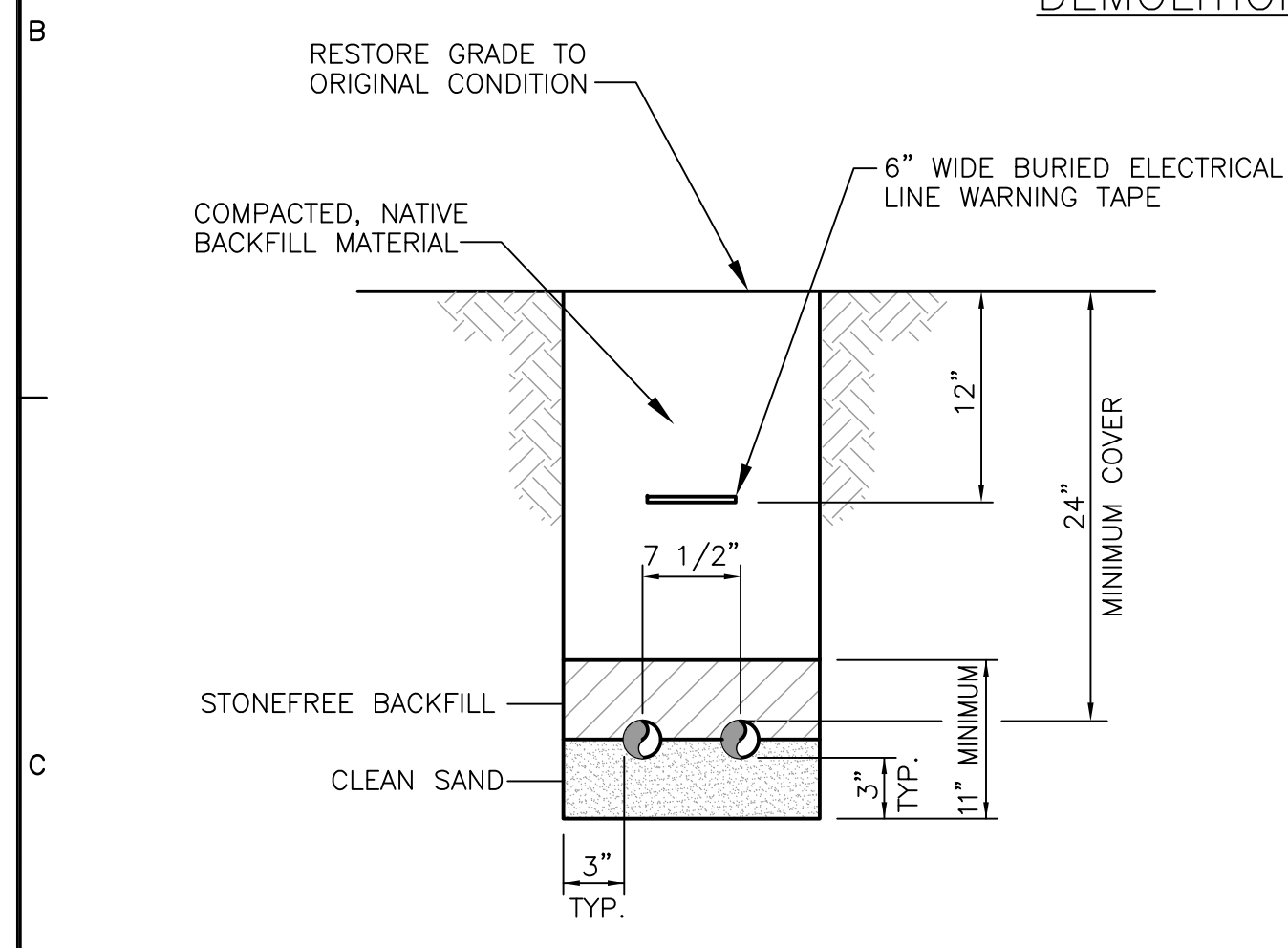
Project No.	190011048	Drawing No.	E-01
Date	5/19/2020		
Drawn By	NM		
Checked By	HRS		

Sheet 4 of 5



CUMMINS POWER GENERATION	
MODEL NUMBER	C80N6
VOLTAGE	480/277V 3PH 4W
STANDBY kW	80
STANDBY kVA	100
ALTERNATOR TEMPERATURE RISE	120°C
FULL LOAD CURRENT	120 AMPS
POWER FACTOR	.8
FREQUENCY	60 Hz
FUEL CONSUMPTION	427.2 SCFH
ENGINE DISPLACEMENT	359 CUBIC INCHES
ENGINE MODEL	QSJ5.9G-G3
ENGINE # OF CYLINDERS	6

**GENERATOR DATA**

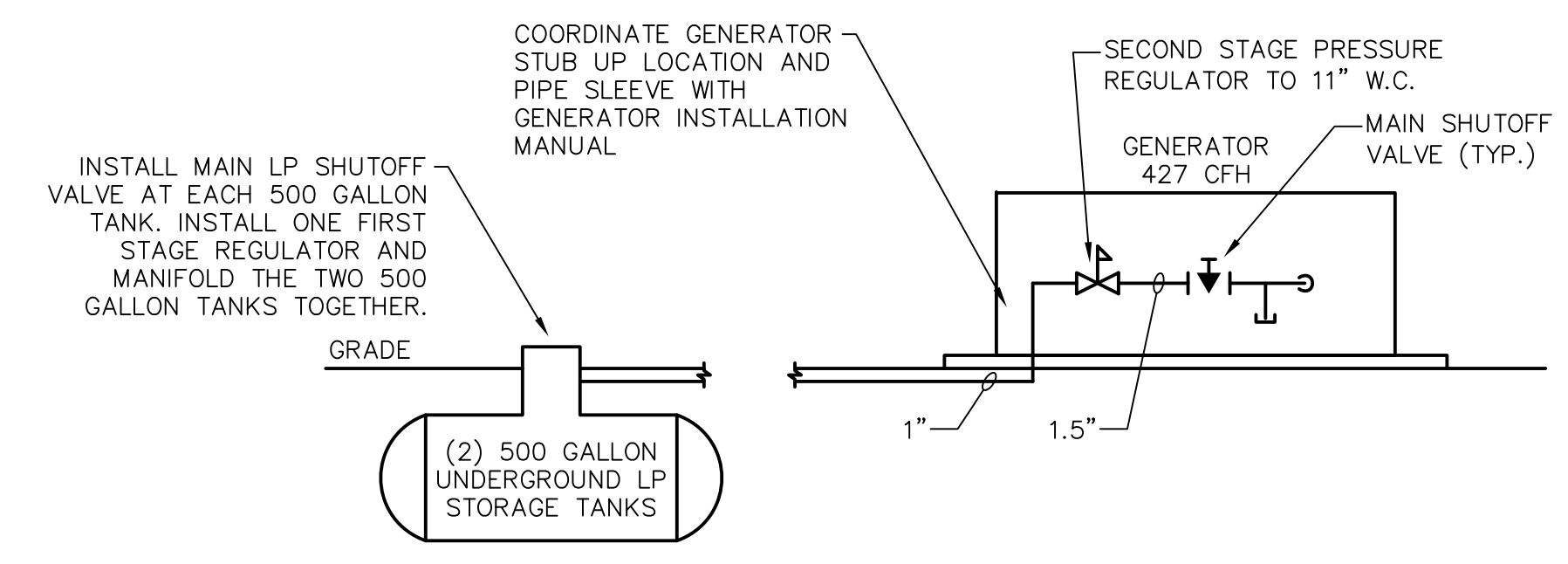


- LP INSTALLATION NOTES:**
- GAS PIPING SHALL BE SCHEDULE 40 BLACK STEEL PIPE FOR ALL INTERIOR AND UNDERGROUND INSTALLATIONS. ALL ABOVE GRADE, OUTDOOR INSTALLATIONS SHALL BE GALVANIZED SCHEDULE 40 BLACK STEEL GAS PIPING. UNDERGROUND PIPING SHALL HAVE 6" WIDE WARNING TAPE INSTALLED ABOVE GAS PIPING.
  - PROVIDE AND INSTALL TWO 500 GALLON UNDERGROUND LP STORAGE TANKS. INSTALLATION AND TESTING SHALL BE PERFORMED BY A CERTIFIED PROPANE TANK INSTALLER AND SHALL COMPLY WITH ALL LOCAL RULES AND REGULATIONS.
  - PROPOSED EXCAVATION FOR PROPOSED LP STORAGE TANK. PROVIDE 6" OF SAND BELOW TANK FOR BASE. ONE 17LB ANODE BAG CONNECTED TO TANK (INSTALLED PER MANUFACTURER'S REQUIREMENTS). BACKFILL ENTIRE HOLE WITH SAND, AND GRADE SAND AWAY FROM HOUSING DOME. CONTRACTOR IS RESPONSIBLE FOR THE SAFE DISPOSAL OF ALL EXCAVATED SOIL. SEE LP STORAGE TANK INSTALLATION DETAIL.

120/208 V. 3 PHASE 60HZ 4 WIRE LIGHTING PANEL 'LP' SCHEDULE											
SERVICE	C/B	KVA	Ø	A	B	C	N	Ø	KVA	C/B	SERVICE
MAIN BREAKER	50A 3P		1					2		30A 3P	GENERATOR LOAD CENTER
OUTDOOR LIGHTS	20A		7					6		20A	DAY TANK
SPARE	20A		9					10		20A	RECEPTACLES
INDOOR LIGHTS	20A		11					12		20A	EXHAUST FAN
HOIST	20A 2P		13					14		20A 2P	WATER PUMP
PUMP CONTROL PANEL	20A		17					16		20A	ENGINE BLOCK HEATER
WET WELL FANS	20A		19					18		20A	GRINDER PIT LIGHTS & RECEPT
WET WELL LIGHT	20A		21					20		20A	VALVE VAULT LIGHT & RECEPT
CHART RECORDER/FLOW	20A		23					22		20A	ALARM PANEL
								24		20A	

PANEL MTD: SURFACE				TYPE: NQ			
MANUFACTURER: WESTINGHOUSE		MAIN LUGS:		PANEL LOADING SCHEDULE			
MAIN BREAKER: 50A		FEEDER ENTRY:		PHASE	WATTS (KW)		
FEEDER SIZE:		ENCLOSURE: NEMA 1		A			
BRANCH BREAKERS		GUTTERS: TOP BOTTOM		B			
NO.	POLES	AMPS.	SIDES	C			
				CONNECTED LOAD			
				SPARE			
				TOTAL LOAD			

**LIGHTING PANEL 'LP' SCHEDULE**



- ELECTRICAL KEY NOTES:**
- PROVIDE 30A, 3 POLE BREAKER TO MATCH EXISTING WESTINGHOUSE PANEL.
  - DEMOLISH ENGINE BLOCK HEATER AND ALL ASSOCIATED CONDUIT AND WIRE TO SOURCE. RETAIN 20A, 1 POLE BREAKER AND RE-LABEL AS SPARE.
  - REPLACE EXISTING MONITORING SIGNALS WITH NEW SIGNALS FROM GENERATOR AND ATS. PROVIDE CONTROL CONDUIT AND WIRE AS INDICATED TO PROVIDE SIGNALS FOR THE FOLLOWING:
    - ATS NORMAL POSITION
    - ATS EMERGENCY POSITION
    - GENERATOR RUNNING
    - GENERATOR FAULT

**LEGEND**

- EXISTING
- NEW
- DEMOLITION

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Date	Description	No.
REVISIONS		
SIGNATURE		
DATE SIGNED		

**LANGAN**  
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Project  
**ROUTE 133 PUMP STATION IMPROVEMENTS**  
BROOKFIELD  
FAIRFIELD COUNTY CONNECTICUT  
Drawing Title  
**ELECTRICAL SINGLE LINE, SCHEDULES, AND DETAILS**

Project No.	19001048	Drawing No.	E-02
Date	5/19/2020	Checked By	NM
Drawn By	HRS	Sheet	5 of 5